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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,762	10/15/2001	Daniel M. Saban	03-DV-7052	8028
23465	7590	11/22/2004	EXAMINER	
JOHN S. BEULICK C/O ARMSTRONG TEASDALE, LLP ONE METROPOLITAN SQUARE SUITE 2600 ST LOUIS, MO 63102-2740			PHAN, THAI Q	
			ART UNIT	PAPER NUMBER
			2128	
DATE MAILED: 11/22/2004				

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

09/682,762

Applicant(s)

SABAN ET AL.

Examiner

Thai Q. Phan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 10/15/2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-31 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1,2,6-12,16-23 and 27-31 is/are rejected.
- 7) ☒ Claim(s) 3-5,13-15 and 24-26 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

### **DETAILED ACTION**

This Office Action is in response to patent application S/N: 09/682,762. Claims 1-31 are pending in the Action.

#### ***Drawings***

The informal drawing of Fig. 5 is not of sufficient quality for printing. Accordingly, replacement drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to this Office action. The replacement sheet(s) should be labeled "Replacement Sheet" in the page header (as per 37 CFR 1.84(c)) so as not to obstruct any portion of the drawing figures. If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action.

#### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 16 is rejected under 112, 2<sup>nd</sup> paragraph because the claim is incomplete for what it claimed for.

#### ***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States

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only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-2, 6-12, 16-23, and 27-31 are rejected under 35 U.S.C. 102(e) as being anticipated by Ali et al, US patent no. 6,198,181 B1.

The applied reference has a common assignee with the instant application.

Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

As per claim 1, Ali anticipates a method and system for designing and fabricating electric motor or machine with feature limitations similar to the claimed invention (Abstract and col. 2, line 64 to col. 3, line 13). According to Ali, the design system uses a computer including a microprocessor for executing computer functions, a database for storing optimization data, and a two-level optimization algorithm having a first optimization module and a second optimization module, said method comprises: generating a plurality of data sets utilizing the first optimization module; determining an optimum response surface based the data sets, utilizing the second optimization module; determining an optimum data set based on the optimum response surface, the first optimization module; and outputting an optimum winding and lamination configuration based on the data set (col. 3, lines 35-42, col. 4, line 31 to col. 5, line 67) .

As per claim 2, Ali anticipates step of generating a plurality of data sets

comprises generating a plurality of winding configurations utilizing at least one of winding parameters and motor level variables stored in the database (col. 4, line 15 to col. 5, line 50, for example).

As per claim 6, Ali anticipates lamination and geometry of lamination that stratify a set of performance constraints, wherein the lamination geometries are from standards in industry as claimed (cols. 4-5).

As per claims 7, Ali anticipates step: utilizing winding parameters and motor level variables (col. 4, lines 15-60, Fig. 3) in the design database to determine a winding configuration for each generated lamination geometry and combine the lamination geometry to satisfy a set of performance constraints, outputting configuration to the database, and determining optimal response surface (col. 5, lines 34-67).

As per claim 8, Ali anticipates optimum lamination solution based on winding response surface and manufacturing objectives.(cols. 4-5).

As per claim 9, Ali anticipates an optimum winding and lamination configuration based on manufacturing solutions, cost, performances, etc. (see above).

As per claim 10, Ali anticipates a method and system for designing and fabricating electric motor or machine with feature limitations similar to the claimed invention (Abstract and col. 2, line 64 to col. 3, line 13). According to Ali, the design system uses a computer including a microprocessor for executing computer functions, a database for storing optimization data, and a two-level optimization algorithm having a first optimization module and a second optimization module, said method comprises:

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generating a plurality of data sets utilizing the first optimization module; determining an optimum response surface based the data sets, utilizing the second optimization module; determining an optimum data set based on the optimum response surface, the first optimization module; and outputting an optimum winding and lamination configuration based on the data set (col. 3, lines 35-42, col. 4, line 31 to col. 5, line 67) .

As per claims 11, 12, and 16, Ali anticipated a plurality of optimization modules including lamination module, winding module, etc. Ali also anticipated a module to determine an optimal lamination and lamination geometry for each winding configuration to satisfy a set of performance constraints (cols. 4 and 5).

As per claim 17, Ali anticipates winding optimization module and utilizes winding parameters and motor level variables stored in the database to determine at least one winding configuration for each lamination geometry that satisfies performance constraints (col. 4, line 15 to col. 5, line 50).

As per claim 18, Ali anticipates means for optimizing winding configuration (see above).

As per claim 19, Ali anticipates the claimed invention in terms of optimum lamination based on winding response surface and predetermined objectives such as manufacturing, cost, motor performance, etc.

As per claim 20, Ali anticipates means to output optimum winding and lamination configuration based on optimum lamination solution as claimed.

As per claim 21, Ali anticipates a method and system for designing and fabricating electric motor or machine with feature limitations similar to the claimed invention (Abstract and col. 2, line 64 to col. 3, line 13). According to Ali, the design system uses a computer including a microprocessor for executing computer functions, a database for storing optimization data, and a two-level optimization algorithm having a first optimization module and a second optimization module, said method comprises: generating a plurality of data sets utilizing the first optimization module; determining an optimum response surface based the data sets, utilizing the second optimization module; determining an optimum data set based on the optimum response surface, the first optimization module; and outputting an optimum winding and lamination configuration based on the data set (col. 3, lines 35-42, col. 4, line 31 to col. 5, line 67) .

As per claims 22 and 23, Ali anticipates optimization modules for winding and lamination with parameters associated with to generate a plurality of winding configuration for motor application, lamination configuration, and combining configurations to optimize performance constraints.

As per claim 27, Ali anticipates an optimization module to generate a plurality of lamination geometries that satisfy a set of performance constraints, wherein the lamination geometry is selected from standard manufacturing database.

As per claim 28, Ali anticipates winding optimization module and utilizes winding parameters and motor level variables stored in the database to determine at least one

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winding configuration for each lamination geometry and satisfy performance constraints (col. 4, line 15 to col. 5, line 50).

As per claim 29, Ali anticipates means for optimizing winding configuration as claimed.

As per claim 30, Ali anticipates the claimed invention in terms of optimum lamination based on winding response surface and predetermined objectives such as manufacturing, cost, motor performance, etc.

As per claim 31, Ali anticipates means to output optimum winding and lamination configuration based on optimum lamination solution as claimed.

### ***Allowable Subject Matter***

1. Claims 3-5, 13-15, and 24-26 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
2. The claims further require means and steps determining an optimum geometry response surface that satisfies a second set of performance constraints based on the lamination geometries and winding configurations that satisfy a set of performance constraints as claimed. The prior art of record, especially, Ali does not expressly disclose the limitations as claimed.

### ***Conclusion***

1. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.
1. US patent no. 4,951,377, issued to Fritzsche, Harold, on Aug. 1990

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2. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Thai Q. Phan whose telephone number is 571-272-3783. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere can be reached on 571-272-3780. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

3. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Nov. 12, 2004



Thai Phan

Patent Examiner/ Art Unit 2128